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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,254	06/30/2000	Robert P. Knight	042390.P8659	9791

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EXAMINER

MORRIS, ANDREW P

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/607,254

Applicant(s)

KNIGHT, ROBERT P.

Examiner

Andrew P Morris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-10 and 13-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-10 and 13-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s) _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-8, 10, 13, 14, 16, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson ("Your Right to Know; Finding Leaks and Bottlenecks with a Windows NT Perfmon COM Object", Microsoft Corporation, January 1999) in view of Jouppi et al. (US Patent No. 6,112,318).

In regard to claims 1, 10, 13 and 19, Anderson discloses a method comprising providing at least one performance object containing a plurality of events (pg. 3, Performance Monitoring Objects), allowing a user to select a subset of events to be monitored during a collection session from said at least one object (pg. 4, Important Counters), periodically reading data stored in each of said performance counters associated with said selected subset of events during the collection session, and displaying names and descriptions of each event associated with the performance object (pg. 3, Performance Monitoring Objects) wherein at least one of the performance counters associated with the selectable events is implemented using a hardware register (such as those pertaining to the memory object, pg. 4, The Memory Object) and at least another one of the performance counters associated with the selectable events is implemented using a software variable (such as those pertaining to the process object, pg. 4, The Process Object). Anderson does not explicitly disclose programming hardware counters to increment in response to the occurrence of a respective event.

Jouppi et al. describe the user configuration of hardware counters by means of a control register (Figure 2, element 250). Each of the hardware counters are able to receive a plurality of events and each counter can be coupled to count a single event by way of an event signal selector (Figure 1, element 120). It would have been obvious to one of ordinary skill in the art at the time of invention to include the hardware counter programming system disclosed by Jouppi et al. in the Performance Monitor system in order to allow for the dynamic configuration of hardware counters (col. 1, lines 55-58).

In regard to claims 4 and 5, the Performance Monitor system is capable of monitoring all of the events associated with a performance object (pg. 3, Monitoring Resource Usage with Perfmon).

In regard to claims 6, 7 and 14, Anderson discloses customizing the collection of performance data and assigning a new name to a customized event (pg. 5, Specialized and Custom Counters).

In regard to claims 8, 9, 17 and 18, Anderson discloses the monitoring of at least one event associated with a hardware component (i.e. Memory object, pg. 3) and at least one event associated with a user application (i.e., process object, pg. 3, see also pg. 6, Using Performance Monitoring to Find Memory Leaks). Although Anderson does not explicitly disclose the monitoring of an event associated with an operating system function, Aubley ("Windows 2000 Performance Tools", Windows & .NET Magazine Network, April 1, 2000) discloses that the Perfmon application does indeed contain such capabilities (See Aubley, Table 1).

In regard to claim 16, The Perfmon tool provides for the simultaneous monitoring of hardware counters, software counters, and operating system functions by implementing a set of

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API supported dynamic linked libraries (DLLs) (See "Windows 2000 Standard EXE files and Associated DLL's" for a listing of DLL files associated with the Performance Monitor program).

3. Claims 15 and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Jouppi et al. as applied to the claims above, and further in view of Safford ("A Framework for Using the Pentium's Performance Monitoring Hardware", University of Illinois, 1995).

In regard to claims 15, 20, 21, 22, 23 and 24, Anderson, as modified above, does not disclose the configuring of the hardware performance counters using a performance dynamic linked library (DLL) (Note: DLLs are used to monitor user applications and system functions, see 103 rejection above in regard to claim 16). Safford discloses the programming of performance counters through the implementation of a device driver, which is controlled using an API supported dynamic linked library (pg. 55 par. 4). It would have been obvious to one of ordinary skill in the art at the time of invention to configure the hardware performance counters of Anderson (as modified by Jouppi et al.) by creating a device driver and controlling said device driver through the use of an API supported DLL, as is described by Safford, in order to create a programming environment where the programmer is shielded from the arduous task of programming in lower level machine code.

In regard to claim 25, Anderson discloses customizing the collection of performance data and assigning a new name to a customized event (pg. 5, Specialized and Custom Counters).

Response to Arguments

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4. Applicant's arguments with respect to claims 1, 4-10 and 13-25 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pratschner ("Instrumenting Windows NT Applications with Performance Monitor", Microsoft Corporation, September 30, 1997) provides further description of the Perfmon tool.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew P Morris whose telephone number is (703) 605-4213.

The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (703) 308 1677. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7414 for regular communications and (703) 746-7414 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

apm
June 16, 2003


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800